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Fishery Leaflet 312

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SMOKING SHRIMP

By Leo Young*

Smoking shrimp is a simple process, and the smoked product is so tasty and eye-appealing that an assured demand may be expected in spite of the slightly increased cost.

Long ago, fish were smoked principally to preserve them for extended periods of time. As the process of smoking developed and improved, smokers found that fish and shellfish could be smoked lightly for added flavor and color. This discovery was a factor in the development of specialty products--commodities whose qualities are improved or whose value is otherwise enhanced by processing. Thus, in addition to the use of smoking as a means of preservation, its employment has been expanded to add "taste" to fishery products.

To obtain information which could be made available to smokers, several lots of shrimp were smoked at the Fishery Technological Laboratory, College Park, Md., during the summer of 1944. Headed shrimp were smoked in the shells, and also after being peeled. Some were boiled before smoking, and some were steamed in a retort. Based on the results of these experiments, the following process is suggested for commercial application.

1. Remove heads from whole raw shrimp.
2. Rinse shrimp in cold running water to remove extraneous matter.
3. Soak shrimp in 50-degree salometer brine or stronger for 30 to 60 minutes. Brine strength and soaking time should be determined by consumer reaction--some people prefer salty shrimp; others prefer a mild flavor.
4. Steam or boil the shrimp for 10 to 20 minutes or until they turn pink (pink color indicates that the shrimp are sufficiently cooked). Shrimp may be boiled in salted water, and Step 3 eliminated.
5. Spread the shrimp on screen-bottom trays. Separate the shrimp so that none touch.
6. Dry the shrimp in the open room or in the smokehouse at room temperature (70 to 80-degree Fahrenheit) until the surfaces are dry to the touch--10 to 30 minutes.
7. Smoke the shrimp for about 60 to 90 minutes or until the desired color and flavor are reached. Use oak or hickory sawdust for the smoke, and keep the temperature low--preferably between 70 and 90 degrees Fahrenheit.

Comments--Smoked shrimp are cooked shrimp which are smoked for additional color and flavor. Shrimp smoked in the shells retain their flavor and texture, and remain moist--a desirable condition. When lightly smoked, the shells should have a light reddish-brown color and the meats should be sweet with a faint trace of smoke flavor. To satisfy some preferences, however, shrimp may be given longer processing to impart a heavy smoke flavor and dark color.

Drying of the shrimp on the trays should be rapid, if necessary using an air-draft created by placing fans in front of the trays.

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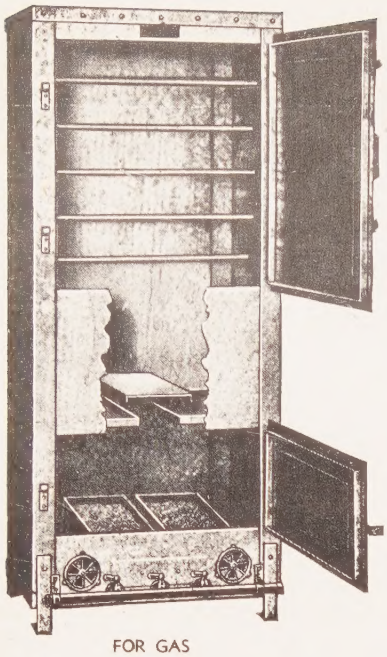
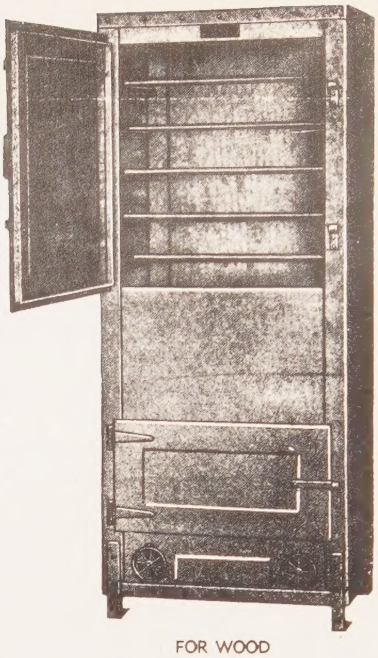
Note: This leaflet supersedes Sep. 109, a reprint from Fishery Market News, September 1945, pages 2-4.



FOR GAS



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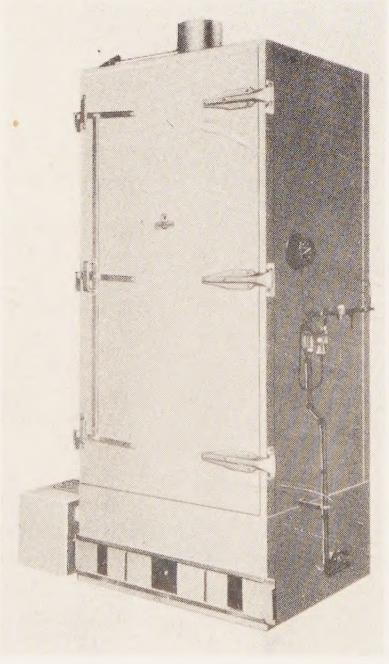
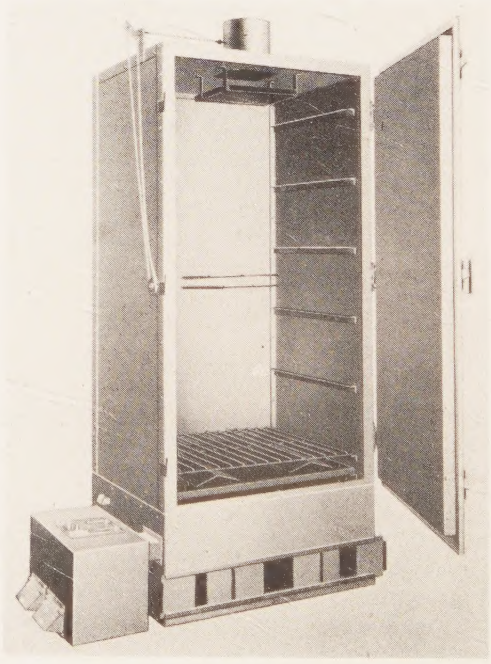
F I G U R E 1





F I G U R E 2

TYPES OF COMMERCIAL PORTABLE SMOKEHOUSES

Commercially-manufactured portable smokehouses may be used (Figures 1 and 2 on page 2). Several types are available in which temperature and humidity can be controlled. Trays are used to hold the shrimp (Figure 3).

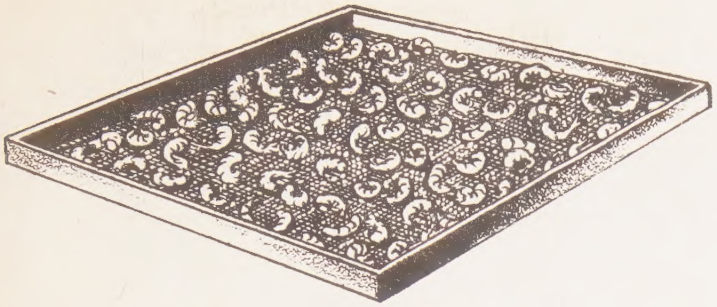


FIGURE 3

Oak or hickory sawdust should be used for smoking because they impart a sweet smoke flavor. Other sawdusts may be mixed with oak or hickory, but when the others are used alone, they impart a slightly bitter taste.

A dense smoke is preferred because the faster the shrimp are smoked the less they will dry out, and the yield of the finished product will be greater.

The yield should approximate about 60 percent; that is, 100 pounds of headed green shrimp should yield about 60 pounds of cooked smoked shrimp.

Shrimp may be smoked after the shells are removed, but the finished product is usually dry-textured and bitter, and the yield is smaller.

Smoked shrimp can be stored satisfactorily at temperatures under 40° F. for 2 to 3 weeks, depending upon the degree to which the shrimp were smoked. Smoked shrimp are perishable and should be refrigerated at all times.

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